

In the claims:

Please amend Claims 1 and 7 as follows:

1. (Currently amended) A modified α -glucosidase enzyme, the modified form differing from the wild-type barley α -glucosidase by proline being substituted for the threonine residue found in the wild-type protein sequence in the amino acid sequence motif Val-Asn-Phe-Thr, the threonine located at residue 340 in SEQ ID NO:1, the modified enzyme retaining activity at a higher temperature than the wild-type enzyme.
2. (Withdrawn) A DNA sequence which encodes the expression of the enzyme of claim 1.
3. (Withdrawn) A transgenic host which expresses the DNA sequence of claim 2 to produce the modified barley α -glucosidase.
4. (Withdrawn) A constructed DNA sequence including a protein coding region encoding a modified barley α -glucosidase enzyme, the modified barley α -glucosidase differing from the wild-type barley α -glucosidase by the presence of a proline residue at residue 340 in substitution for the threonine residue located in the motif Val-Asn-Phe-Thr in the wild-type protein.
5. (Withdrawn) A transgenic host which expresses the constructed DNA sequence of claim 4.
6. (Canceled)

7. (Currently amended) A modified α -glucosidase enzyme, the modified enzyme differing from the wild-type barley α -glucosidase by an amino acid modification which confers thermal stability on the modified enzyme so that the modified enzyme retains enzymatic activity at a higher temperature than the wild-type enzyme, the modification being selected from the group consisting of adding a proline and removing deleting an aspartate at residue 101, deleting an aspartate from at residue 105, deleting an aspartate from at residue 369, adding N-glycosylation site and deleting an aspartate from at residue 372, adding N-glycosylation site to residue 463, deleting an aspartate from at residue 508, and adding N-glycosylation site and deleting an aspartate from at residue 694, the residues referring to SEQ ID NO:1, and the residue positions determined by best-fit alignment of amino acid sequences to SEQ ID NO:1 and deleting an aspartate from residue 764.

8. (Withdrawn) A DNA sequence which encodes the modified α -glucosidase enzyme as claimed in claim 7.

9. (Withdrawn) A method of making a mutant form of the enzyme barley α -glucosidase comprising the steps of:

- (a) constructing a mutant gene sequence encoding a mutant form of the α -glucosidase enzyme;
- (b) cloning the mutant gene sequence into an expression vector;
- (c) expressing the protein encoded by the expression vector to produce the protein encoded by the mutant gene sequence;
- (d) recovering the protein produced; and
- (e) testing the protein for both α -glucosidase activity and for thermostability; wherein the mutant gene sequence encoding a mutant protein has at least one mutation selected from the group consisting of adding a proline and removing an aspartate at residue 101, removing an aspartate from residue 105, removing an aspartate from residue 369, adding N-glycosylation site and removing an aspartate from residue 372, adding N-glycosylation site to residue 463, removing an aspartate from residue 508, adding N-glycosylation site and removing an aspartate from residue 694, and removing an aspartate from residue 764.